

A REPLY ON THE GENERA *NEPTUNEA* AND *SYNCERA*.

By T. IREDALE.

Read 9th December, 1921.

THE statement that because *Murex antiquus*, Linné, as *C. argyrostomus*, was named as type of *Chrysodomus*, Swainson, it becomes unavailable for selection as type of *Neptunea*, Bolten, is not tenable. This particular point has been placed before the International Committee on Zoological Nomenclature, and is dealt with by Opinion No. 62, which has definitely decided against Dr. Dall's view. As to the validity of *Syncera*, I quote the full account, as the periodical in which it occurs is rare: "*Nerita Syncera Hepatica*, N.S. The animal of this shell differs from all the others of this order, by the eyes appearing to be at the ends of the tentacula; but, I believe, that they are placed on a peduncle, as long as the tentacula, and the peduncle and tentacula are sordered together".

I leave this to malacologists to decide if such a tentative statement with regard to a "new species" of "*Nerita*" of which no conchological features whatever are given is recognizable, and can be construed as anything else but a *nomen nudum*.

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THE NOMINATION OF "RECENT" FOSSIL MOLLUSCA.

By TOM IREDALE.

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THE determination of some marine mollusca from Twofold Bay, New South Wales, necessitated the consideration of their fossil relations, and the lack of some means of indicating the suggested relationship was strongly impressed upon me. The facts concerning the distribution of the recent species in connexion with the fossils must first be displayed. Bass Straits differentiates two regions when the littoral mollusca are regarded, but when deep-water forms are examined the distinction is not so well marked; nevertheless, it is present with modifications. In a given locality the deep-water forms differ more or less appreciably from their littoral relatives, but in two localities while the littoral shells may differ their deep-water forms may be almost inseparable from each other. In other classes in zoology trinomials have been utilized with success to indicate geographical variation in the forms of a species. Extreme usage in ornithology has tended to the confusion of representative species with geographical subspecies, and in the case of marine mollusca great care must be exercised lest individual be mistaken for geographic variation. Still greater care must be taken in connexion with deep-water forms, and yet more when fossils are

criticized, for to be of any value the suggested nomination must be usable with wide limits. In some cases even subspecific distinction has been denied such forms, in others full specific value unhesitatingly accepted. The two extremes are probably incorrect, as the first is too little, and the second does not indicate any close relationship whatever. A mean course is the valuable one desired, and I would recommend the following method as available and suggestive.

For the littoral geographic forms I advise the usage of simple trinomials such as in common use in other classes, so that with this method we would be in agreement with usual conditions. For the deep-water forms I propose to continue the usage of a trinomial with a plain bracket enclosing the second name. For the fossil forms corresponding as closely as to be recognizable as of apparently direct lineage I would use again a trinomial, but in this case use a square bracket for the second name. To illustrate we will regard a special case which is partly true and partly fictitious. A shallow-water Sydney shell was named *Turritella sinuata*, Reeve. From 38-40 fathoms in Bass Straits, Watson named *Turritella runcinata*, *T. accisa*, and *T. cordisimei*. Verco has regarded *accisa* as a deeper-water species than *runcinata* in South Australia, and I have suggested that *runcinata* is the deep-water form of *sinuata*, while *cordisimei* is the shallow-water form in Bass Straits. A fossil species called *T. platyspira*, Tate, seems the ancestral form of *sinuata*. Granting these premises, I propose to show the facts by such a nomination as the following :—

T. sinuata sinuata, the Sydney shallow-water form.

T. sinuata cordisimei, the Bass Strait shallow-water form.

T. (sinuata) runcinata, the Bass Strait deeper-water form.

T. (runcinata) accisa, the South Australian deep-water form.

T. [sinuata] platyspira, the fossil representative.

By this means the specific distinction is not impugned but the comparative relationship is expressed. The simplicity of this scheme is apparent, and the only argument against it is that I am suggesting a trinomial nomenclature instead of a binomial. I agree to this, but point out that the binomial scheme is incapable of expressing a series of relationships such as I have here outlined.
